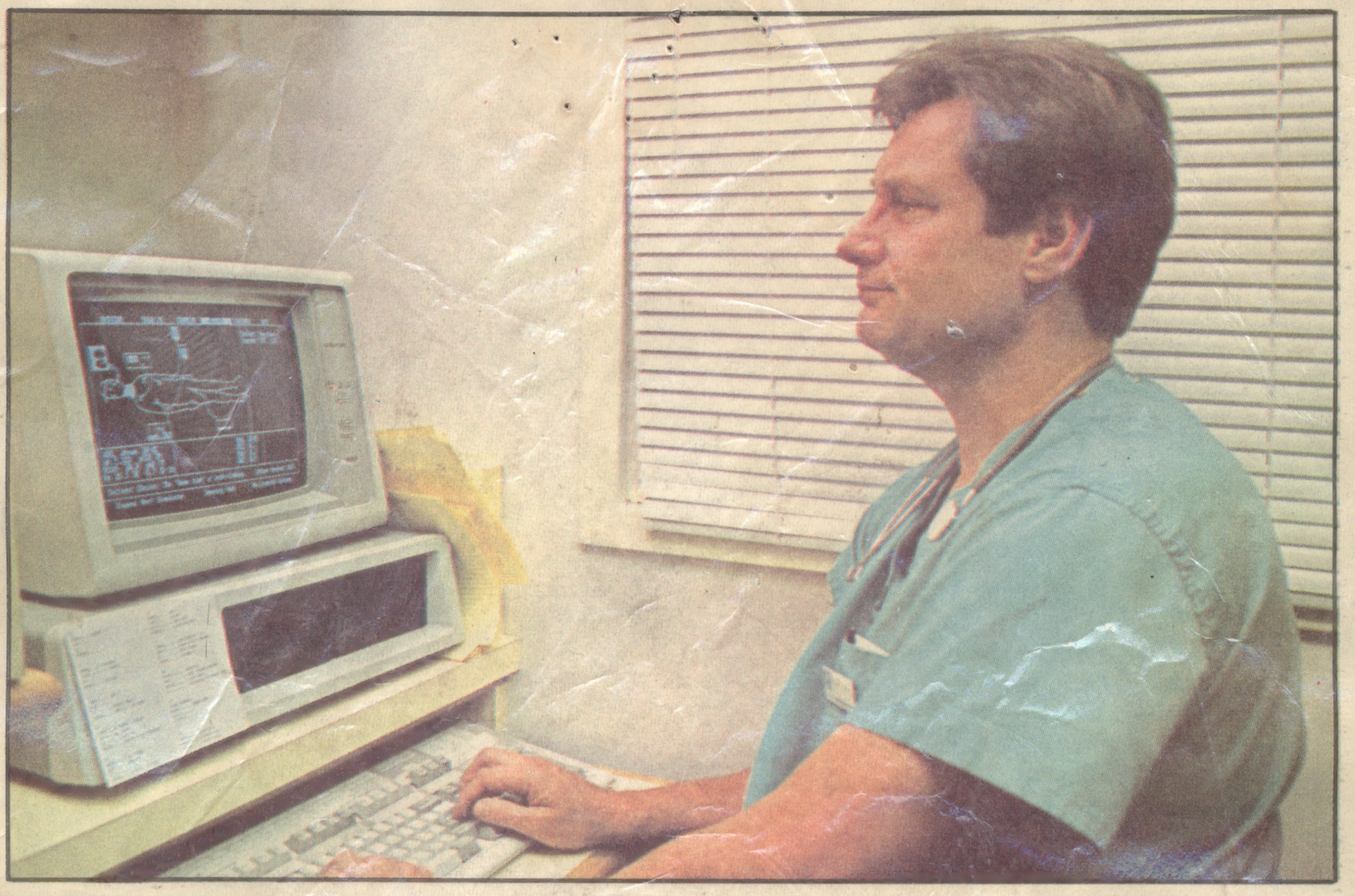


Herald Photo/Andrew Holloway

Dr. Bruce Argyle demonstrates one of his computer programs used for medical training at Orem Community Hospital.

'Mad Scientist' physician designs software

By SHARON M. HADDOCK
Herald Staff Writer

The "Mad Scientist" of software is actually an emergency center physician when he isn't creating programs on the computer keys.

And he's found a way to allow medical personnel to "practice" on their patients without causing them permanent harm.

His name is Dr. Bruce Argyle, emergency center physician for Orem Community Hospital. Argyle has developed five educational programs for the medical profession over the past few years.

"Cardiac Arrest!" was the first, a software program designed to simulate situations that realistically test the knowledge and decision-making power of those treating a patient whose heart has stopped.

"Trauma One!" is the latest, designed to recreate situations where the patient is unstable, near death or critically injured.

"Blood Gases" helps a nurse review her knowledge of complex vital information, recognize abnormalities and appreciate a return to normal balance.

"Patient Instruction Generator" or "PIG" speeds up the process of providing a printout of customized instructions to each patient leaving the ER.

"Code Team!" helps a practitioner get ready for the certification tests he or she must pass to become cardiac certified.

Each program has been developed in Argyle's spare time. His basement is the hub of manufacture, his wife Diane is in charge of distribution.

"Mad Scientist Software" has sold thousands of copies of "Cardiac Arrest!" and is deliberately putting on the brakes to avoid getting too big to handle at home.

Argyle likes developing the programs, testing them on the "guinea pig" staff members at Orem Community. After that, he would rather not worry about the details.

He started working with computers on vacation in 1983, thinking he would have time in the evenings to learn about his new computer.

"Hurricane Atilla the Hun hit" recalled Argyle. "For two weeks we sat inside our condominium. During that time, I taught myself to self-program and then just extended from that."

Argyle developed "Cardiac Arrest!" over the next three years.

"I started giving it away until someone said I ought to sell it. So I bought an ad for $800 in a magazine and just hoped to get my $800 back."

"Cardiac Arrest!" is now available for six different computers. It's now being sold in Europe in a German version, "Herztillstand!".

Argyle's mother-in-law is employed full-time to help run the business with his wife and the programs sell well enough to provide "fun money" for the family.

"Nobody then was marketing educational computer software directly to medical personnel," said Argyle. "Now there's some horrendous competition."

That doesn't worry Argyle. "We kind of like it as a mom and pop operation. The kids stuff envelopes. We do all of our own brochures, print our own pictures."

The cover shot on one brochure is a picture taken of Argyle, his wife, and his baby daughter by his 12-year-old son.

Argyle quips about the "cut" he gets of the profits as a royalty on the software.

For new medical personnel, or those gearing up for recertification, the programs provide an easy-to-use training ground for real-life emergencies.

The computer responds to questions, times procedures and effects of medications.

It scolds the user for mistakes, is quick to note the slightest error or misjudgement.

If mistakes are made, the simulated patient "dies." Sometimes, even if everything possible is done, the patient still doesn't respond.

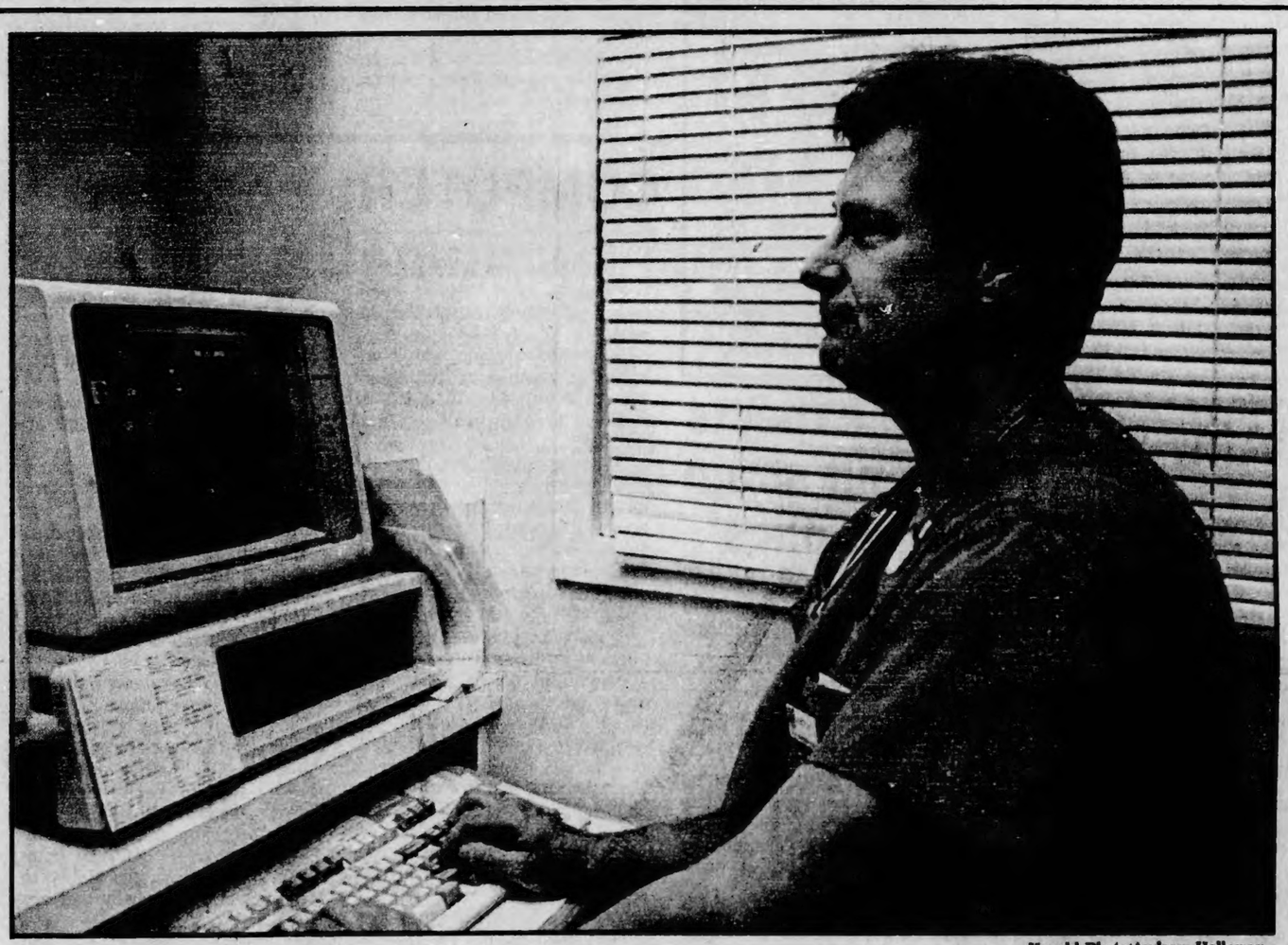
"It's as much like real life as possible," said Argyle. "Sometimes you do everything right and the patient doesn't make it."

Argyle feels uniquely qualified to design the teaching programs since he is a working physician. He has written what he describes as a practical, workable program.

The programs use English language commands to help reinforce and build in the ability to transmit orders verbally that are not misunderstood.

"It's like a game of Fox and Geese. The computer tries to catch your errors before you reach home. Everything you do, it's checking to see if there is a higher priority."

The programs have a humorous touch, too. If the program decides the patient died, then the physician is informed of several probable consequences; "You're being sued. You are going to wind up selling vacuum cleaners in Kalamazoo."



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(See COMPUTER, Page A2)

COMPUTER:

(Continued from Page A1)

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December 13, 1988 9:24 pm
Bp 120/80; T99.3; P 86; R 16;

#COUGH—onset 1 wk ago; productive with colored sputum; no fever; T100 at home today; tobacco—2 ppd; no ear pain; no sinus pain; no coryza; no pharyngitis; no hemoptysis; no wheezing; no shortness of breath; no chest pain;
O: TM's nl; no sinus tenderness; no pharyngitis; no swollen of tender nodes; lungs—no rales; few rhonchi; no wheezes; heart—no murmers or gallops;
Lab—CBC, Chest X-neg for infiltrates
A: bronchitis—handout given.
P: Doxycycline 100 mg bid X 10 days because of smoking;
Handout given
Daniel C. Russler, M.D.

Figure 2

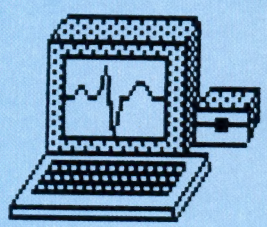
In summary, explorations with the MEDICALdesk prototype suggest that an automated physician workstation should contain a number of features. The first feature is a software environment that allows a quick toggle back and forth between patient summaries, progress notes and reference software. The second is an exam room printer that is quiet and fast for printing prescriptions and patient education materials. The third is communication ability for physician interaction with mainframe medical reference computers. And the fourth is problem-oriented guided entry to improve totality and efficiency of data entry by physicians and physician support staff.

In order to make the MEDICALdesk workstation design available to other physicians, MEDICALdesk has arranged to deliver the MEDICALdesk files at no charge if purchased along with the DESQview and Clinical Reference System software at the other companies' usual prices. These can be obtained from MEDICALdesk, 109 First St., Lodi, WI 53555 or by calling 608/592-4100. A version of MEDICALdesk is available for the single computer user; another version is available for the Kermit network; and a third version for a Novell network is under development. It is suggested that the single computer product be obtained first so that physician and staff will have a chance to become familiar with the workstation by using it for histories and physicals, patient education and telecommunications, prior to installing a whole system.

When discussing new technology, "What's next?" is always the last question. We are looking forward to the development of future physician workstations that are sure to include exciting, new hypertext technologies. Hypertext is programming hidden behind computer text that revolutionizes information management. Another relatively new technology, CD-ROM, is already here; laser-read storage media promises to bring a library of information into the examination room. Since the CD-ROM technology is already here, proliferation of exam room workstations to access it will spur development of the CD-ROM information data bases. The MEDICALdesk prototype is one of a long line of sophisticated physician workstations that I am sure will revolutionize medical care in the twenty-first century.

The message to P&C readers is: Physicians, learn to type! ■

Dr. Russler practices medicine in Lodi, Wisconsin.



Cardiac Arrest!

An incredible ACLS simulator for IBM, Apple II, Atari ST, Atari XL/XE

Only **$69**

Don't let the low price fool you. You've never seen anything this good on a desktop computer. Not an IF-THEN or choose A, B, C-type program, Cardiac Arrest! is a mathematically-based simulator. You interpret the history, on-screen EKG, lab data, and vital signs, then give treatment orders in plain English.

Antic: "impressive and amazingly complete"
ST World: "both highly educational and fun"

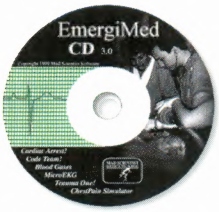
Cardiac Arrest! is almost as fun to use as it is educational. There are varying degrees of difficulty, with over 45 patients — and none is ever the same twice. You can actually go "beyond ACLS" with hypothermia, hypocalcemia, hyperkalemia, and more.

Our other ACLS teaching software is excellent, and priced within reach of those who need to use it!

Cardiac Arrest!	$69
ACLS Protocols	$29
EKG Teaching	$29
CardioQuiz	$19
Blood Gases	$24

Ask about the four-disk ACLS Package (includes Cardiac Arrest!) for $109.

Mad Scientist Software
2063 N. 820 W., Pleasant Grove, UT 84062
Visa/MC orders call 801-785-3028



Bestseller!

EmergiMed CD

Take charge of emergency medical situations with this unbeatable CD-ROM! *EmergiMed* brings you six tools in one, including the complete versions of *Cardiac Arrest!, Code Team!, Trauma One!, MicroEKG, Chest Pain Simulator* and *Blood Gases.* Through step-by-step instruction, games, self-testing and other devices, these comprehensive programs help you improve your treatment skills across the entire spectrum of emergency medicine.

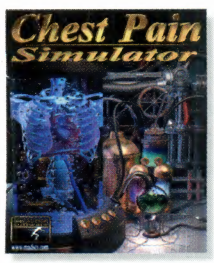
$299 personal **Item #890**
(Call for institutional and network pricing)

Bestseller!

Understanding EKGs

In an era when it is dangerous not to have all the information you need, being able to understand an EKG is essential. This fully-interactive CD-ROM includes everything you need to understand EKGs, from the basic principles of anatomy and physiology of the heart to the complex principles of rhythm strips and 12-lead EKGs. Learning is enhanced by full-color graphics, video, interactive testing and click-on definitions.

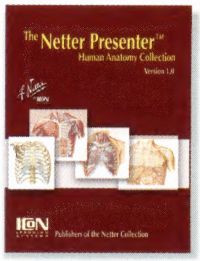
$70 personal **$150** institutional **Item #459**



Chest Pain Simulator

With increasing instances of improper chest pain diagnosis and management comes the equally imminent potential for malpractice lawsuits. Avoid the paths leading to malpractice and patient loss with *Chest Pain Simulator*. This program will help you become aware of the dangers of misdiagnosis—and of subsequently withholding lifesaving thrombolytics from a patient in atypically presented myocardial infarction. Through various simulated chest pain work-ups, you'll gain differential diagnosis experience and learn how to proactively treat all chest pain with a "worse-case scenario" approach. With the latest diagnosis and treatment information, you'll protect yourself and your patient.

$99 personal **Item #1199**
(Call for institutional and network pricing)

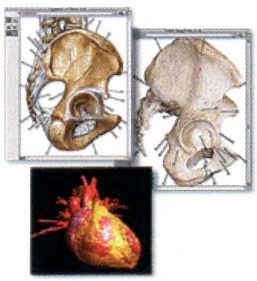


New!

The Netter Presenter: Human Anatomy Collection

Impress your colleagues as you educate them! *Netter Presenter* helps you customize, export and print high-quality medical art quickly and easily from your home computer to personalize your learning or create a presentation that's sure to delight and inform. Convenient four-way search capability allows you to search by region, keyword, system or plate number to find the images you want. Highlight specific anatomic structures or areas, access large images, and use revisable and editable presentation lists to organize your customized images before exporting them into your presentation program. Combine the fundamentals with fun as you review and renew your understanding of human anatomy with *Netter Presenter!*

$795 personal **Item #1217**
(Call for institutional and network pricing)



Bestseller!

A.D.A.M. Interactive Anatomy 3.0

Get more than 20,000 images of anatomical structures in four different views with this comprehensive, intuitive CD-ROM. Plus, you'll receive illustrated, fully dissectible male and female bodies and supplemental "pinned atlas image" illustrations and cadaver pro-section photographs from the Bassett collection. You'll also get incredible 3-D anatomy models of the heart, skull, trachea and lungs built from the *Visible Human* data set. Now includes 3-D *Vol II: Brain, Eye, Ear, Male and Female Reproductive Systems.*

With *A.D.A.M. Interactive Anatomy 3.0,* You Can:

- Learn from the inside out using exploded 3-D models.
- Rotate each model for easy viewing from any angle.
- Toggle between normal and transparency modes to see internal structures or structures deep within the transparent structure.
- Create courseware and presentations with "Slideshow," a customizable authoring tool.

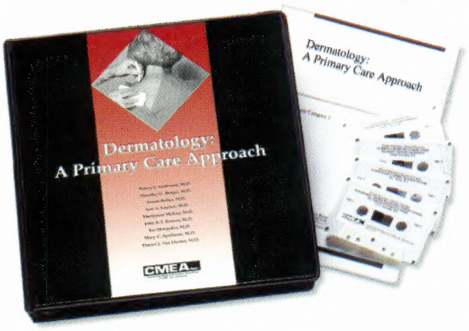
$495 personal **$1,995** lab pack
Mac **Item #816M** • Windows **Item #816W**

Save $40!

New!

Develop a Better Understanding of Common Dermatological Problems

Dermatology: A Primary Care Approach



Gain insight into the common dermatological diseases you encounter in your primary care practice and **earn up to 20 hours of CME credit** with this practical 12-tape home-study course. Our highly-rated faculty will discuss phototrauma and photodamage, pruritus, dermatitis, infectious diseases, aging skin, skin infections, ethnic skin problems, vulvar dermatoses, excessive and thinning hair, HPV, herpes and more! You'll also learn about current dermatologic advances and effective treatment methods. A comprehensive syllabus is included to complement the audio lectures.

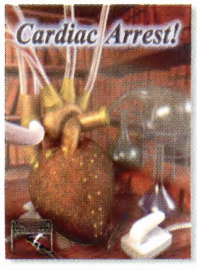
This course will also help you discuss the most recent advances in the diagnosis and management of important dermatologic diseases seen in primary care, including eczema, viral exanthemas, psoriasis and acne vulgaris.

Explore These Informative Topics:

Diagnostic and Therapeutic Updates • Phototrauma and Photodamage • Perplexing Pruritus • Hairy Dilemmas: Too Much, Too Little • Topical Treatment of Dermatological Diseases: Which, When, Where? • Atopical and Contact Dermatitis: Exorcising the "Eczemas" • Skin Manifestation of Infectious Diseases • Plugs, Bugs and Drugs: Acne Treatment Options • Gerodermatology—Evaluation and Treatment of Aging Skin • Common Cutaneous Conundrums in Kids • Bacterial and Fungal Skin Infections • Ethnic Skin Problems • Vulvar Dermatoses • Effective Management of the Patient with Psoriasis • From Adolescence to Senescence: Acne Vulgaris and Rosacea • Office Management of Infestations, Stings and Bites • Human Papilloma Virus Infections • Dermatology Update • The Herpes Virus: What's True of What's New

Special Offer! **$199** personal (Regularly $239) **Item #AC21**
When you order by June 30, 2001

(Includes 20 hours of CME credit, 12 audiotapes, a comprehensive syllabus and a posttest)
Accredited by CMEA, Inc. Original release: 1/00-9/00.
Reviewed and approved by the CMEA, Inc. Education Committee in February 2001.



Bestseller!

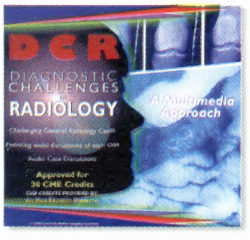
Cardiac Arrest!

Learn the new ACLS 2000 guidelines with the help of this exciting, interactive program on CD-ROM. *Cardiac Arrest!* casts you in the role of emergency physician. The patient's history is presented and resuscitation efforts begin. You give treatment orders and watch them carried out in real-time video as an on-screen ECG, vital signs and laboratory data are presented for your interpretation. Test you skills on a variety of patients ranging in difficulty. Learning has never been so much fun! **Earn up to 22.5 hours of CME credit** for an additional fee.

You'll Enjoy:

- An on-screen textbook
- Protocol charts and drug information
- Treatment hints
- And much more

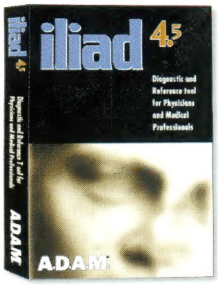
$99* personal **Item #872**
(Call for institutional and network pricing)
*A fee of $60 for credit is not included in price and is collected upon completion of the program.



Diagnostic Challenges in Radiology: A Multimedia Approach

You will benefit from this instructional CD-ROM that presents some of the most challenging diagnostic cases in radiology. From the teaching files of Stephen R. Baker, M.D., each case consists of a detailed X-ray image, a helpful clue, a multiple-choice question, corresponding written and audio descriptions of radiological findings, clinical correlates and differential diagnoses. Master the art of making an accurate diagnosis with this interactive step-by-step learning method. Plus, **earn up to 30 hours of CME credit.**

$375 personal **Item #873**
(Call for institutional availability)



Bestseller!

Iliad 4.5

Iliad 4.5 is an innovative expert medical system that employs artificial intelligence to assist in primary care/internal medicine differential diagnoses. It functions as a diagnostic consultant, generating a differential diagnosis based on individual patient data and recommendations for further work-up or treatment. It offers three primary operating modes: consultation, simulation and reference. *Iliad 4.5* features an exhaustive diagnostic and treatment knowledge base built on actual clinical findings in over 500,000 documented cases. *Iliad 4.5* serves as a diagnostic consultant, reference and documentation tool for the point-of-care setting. The CD-ROM includes treatment options for more than 1,200 diseases and more than 5,600 disease manifestations, as well as more than 1,400 high-quality digitized images for reference.

$295 personal **$995** lab pack
Mac **Item #670M** • Windows **Item #670W**

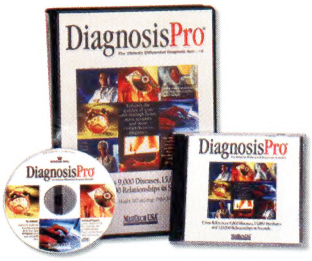
Quick Medical Reference

Quick Medical Reference (QMR) is the revolutionary diagnostic decision support system that helps organize and prioritize critical patient information. Originally developed over 20 years ago at the University of Pittsburgh, *QMR* offers valuable data on more than 700 diseases and 5,000 patient abnormalities. However, *QMR* goes further than just presenting information—it helps you ask the right questions and suggests diagnostic possibilities based on patient input from your own specific clinical situations. *QMR* lets you quickly and easily formulate differentials, rule-in or rule-out diagnoses, view disease profiles, and review medical histories, symptoms, disease complications, signs and labs. With *QMR,* you get the best of both worlds—a remarkable resource that is simple to use, but rich and complex in the data it brings together seamlessly and efficiently.

$495 personal **Item #135**
(Call for network pricing)

Visit Us Online at
www.medinfosource.com/catalog
for Additional Diagnostic CD-ROMs, Including:

Atlas of Differential Diagnosis in Dermatology **Item #1116** **$275**
Cases in Cardiology **Item #634** **$99**
Current Medical Diagnosis and Treatment **Item #1122** **$199**
DermaDex **Item #485** **$150**
Mastering Ausculation **Item #1123** **$165**



Bestseller!

DiagnosisPro

Including the Handheld Pocket PC Version

DiagnosisPro 5.0 is a powerful, interactive tool which allows you to quickly generate differential diagnoses, based on multiple entries. Using the signs, symptoms, lab values, X-ray or EKG results you enter, *DiagnosisPro* generates a hierarchical list of diseases from its database of 10,000 diseases and 20,000 findings.

This comprehensive program provides a detailed review of each disease, including clinical presentations, abnormal lab values, rule-outs, complications, treatments and more. It also features more than 15,000 ICD and CPT codes. Plus, you can compare the characteristics of any 2 diseases side by side.

Designed to make your practice safer, reduce billing errors, improve quality of care and save time, *DiagnosisPro* is a must-have decision support tool.

DiagnosisPro 5.0 can be easily installed on stand-alone computers, most network servers and handheld Pocket PC devices.

Special Offer! **$249** personal (Regularly $499) **Item #893**
(Call for institutional and network pricing)

PAIGE: Patient Instruction Generator

Don't just prescribe an aftercare program for your patients—customize one to meet their exact needs and specifications! With *PAIGE*, you can print prescriptions, retrieve patient lists from other programs, create links, design and interchange instruction databases, and more. Emergency/Urgent Care, Primary Care and Emergency with Spanish versions, plus editable text and graphics maximize your capabilities, while a simple menu system, easy-to-follow instructions and context-sensitive "help" buttons minimize effort. Run *PAIGE* from another program, then protect and save your data under a secure password.

Now you can completely care for your patients by putting it all on one *PAIGE!*

$289 personal **Item #1200**
(Call for network pricing)

Backspace

BY THE WAY, YOU PEOPLE HAVE REALLY MESSY HANDWRITING

Edited by Don Willmott

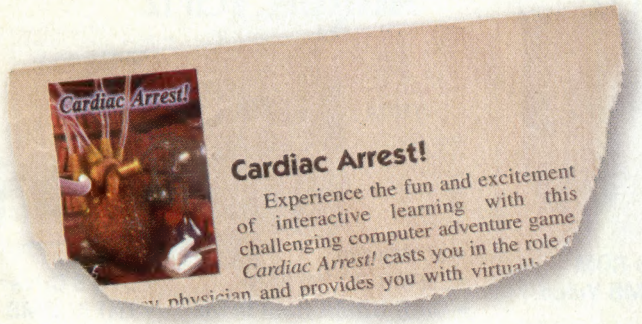
Isn't this an odd little product? Make your life electronic, but keep working on paper. (Franklin Covey catalog)

NEUTRON BOMB

In March, Reuters reported: "Scientists have moved a step closer to developing a new generation of computers after looking at a branch of physics that deals with particles invisible to the human eye." As opposed to all those huge electrons we see whizzing around us every day.

The New York Times ON THE WEB

Whatever happened to "All the News That's Fit to Print"? (www.nytimes.com)

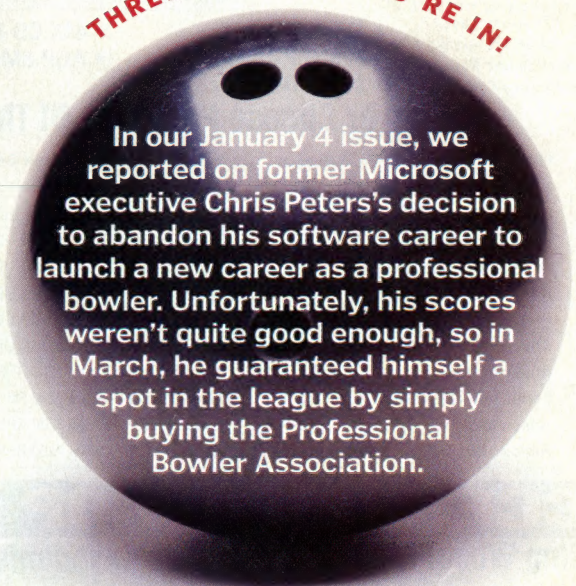


Fun and excitement? Not two things we typically associate with heart attacks. (Continuing Medical Education Associates catalog)

To protect your computer's memory, never place clock radios, phones or magnets on or too close to your monitor, hard drive or disks. These items can strip the magnetic tape inside the computer.

Wise advice from the *St. Louis Post-Dispatch*.

THREE STRIKES, YOU'RE IN!



In our January 4 issue, we reported on former Microsoft executive Chris Peters's decision to abandon his software career to launch a new career as a professional bowler. Unfortunately, his scores weren't quite good enough, so in March, he guaranteed himself a spot in the league by simply buying the Professional Bowler Association.

If your entry is used, we'll send you $50 and a *PC Magazine* T-shirt. Send your entries to Backspace, *PC Magazine*, 28 E. 28th St., New York, NY 10016-7930 or via e-mail to *backspace@ziffdavis.com*. Winners this issue: Stuart Asakawa, James Barone, David Curry, and Tom Montgomery.

PC Magazine, ISSN 0888-8507, is published semimonthly (monthly in July and August) at $39.97 for one year. Ziff Davis Media Inc, 28 E. 28th St., New York, NY 10016-7930. Periodicals postage paid at New York, NY 10016-7930 and at additional mailing offices. POSTMASTER: Address changes to *PC Magazine*, P.O. Box 54093, Boulder, CO 80328-4093. The Canadian GST registration number is 14049 6720 RT. Canada Post International Publications Mail Product (Canadian Distribution) Sales Agreement No. 266477. Printed in the U.S.A.

HyperMoney Charts HyperMoney also delineates your expense patterns with charts that show the balance of expenses in any month that you select and compare your expenses to your budget.

- The 1-Month chart (**Figure 7**) compares what you spent in each expense category to your budget for the selected month. It graphically highlights expenses that are above or below budgeted levels, and shows you how your expenses and budgets relate to each other.
- The 12-Month chart (**Figure 8**) shows your expenses for each month in the year. The stacked bar chart puts all the expenses for any given month on top of each other, so you can see the total and the proportion of each individual expense. With it, you can immediately see if a month goes over budget; you can also see the effect of seasonal spending on your overall expenses.
- The Expense Item chart (**Figure 9**) magnifies the activity for an individual expense. The chart compares your expenses to your budget over twelve months for any expense category, making it a useful tool for analyzing finer detail on spending patterns of suspect items.

HyperMoney also creates cards for your expense categories; these are called the ''history'' cards, since they show you your spending over time for a single category.

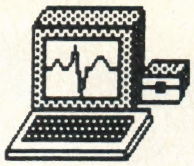
Entering Budget Amounts Annual expenses are divided evenly across the twelve months. To enter a budget item, click on the Lookup button; then successively select each expense category and type the monthly budget amount into the Budget field.

Entering Expenses To make new entries, simply click on the appropriate Pay By method and the Expense list to select the type of expense being entered. Then enter the amount of the expense and a short description of the item being paid.

HyperMoney automatically positions the cursor in the Amount field, and you can use the Tab key to move to the Description field. (If you want to use the Tab key, HyperMoney's fields must be entered in the sequence shown in the objects table in **Listing 1**). HyperMoney then automatically updates the Pay By and the Expense history cards for those items; it does this so that you can review an expense category or individual item, or all the expenses for a particular credit card or checking account. The history cards always reflect the total of all entries, which makes them a valuable reference for reviewing of expenses in any category.

Reviewing Expenses and Payment Methods You can review any Pay By or Expense history card by pressing the Lookup button and then clicking on the name of the item you want to review. The appropriate history card is retrieved and displayed. Each history card is set up with a scrolling field so that it can contain up to 30,000 characters of budget information for that category. You'll notice that the date of the expense has been formatted with the year as the first item, i.e., YY/MM/DD. Although HyperMoney does not do any sorting, you may want to add your own sorting routines (or *Macintosh Hands On* may publish add-on enhancements), and having the date in this sequence will greatly simplify the future addition of a sorting script.

Adding and Deleting Categories You can add or delete expense categories after your initial setup with the Add Acct and Delete Acct buttons. When you click on one of these buttons, enter the name of the category. When you delete a category, it must be spelled *exactly* as it appears in its list. These buttons automatically add or delete the items in their respective lists and add or cut the history cards for the item selected.



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Antic: "Inpressive and amazingly complete. Information packed manual."

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Computer News for Physicians: "This program series is an excellent value."

Cardiac Arrest! is almost as fun to use as it is educational. There are varying degrees of difficulty, with over 45 patients — and none is ever the same twice. You can actually go "beyond ACLS" with hypothermia, hypocalcemia, hyperkalemia, and more. Yet the manual is so complete and well-organized that non-medical people use the simulator to "play doctor."

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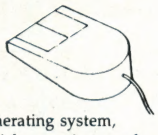

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EQUIVALENCE
continued from page 48

name table. Be sure your program knows how to search through the variable tables for the information it needs.

OTHER USES

The previous examples mostly speed disk I/O. But there are many other powerful ways to use equivalenced variables, such as creating and manipulating pseudo-records and defining pointers.

Pascal lets you to declare RECORD data types. A RECORD is a variable which contains other variables. For example, a single RECORD variable for a banking program might contain a person's name (a string), an account number (an integer), and account balance (a floating-point number).

You can emulate a RECORD in BASIC by consecutively equivalencing a set of variables into one large string.

This form may be useful for creating a small database or other systems where you need to keep data grouped together in a particular fashion.

You can also use equivalenced variables to emulate pointers. Just find the string's eight-byte block in the variable value table and change its offset (bytes three and four) to point to the desired memory location. In Listing 1, for example, we made the string point to the audio control registers.

Try some high-speed screen I/O. Create a string the same size as the screen and point it to screen memory. Anything you put in the string will appear onscreen *instantly*.

PROGRAM TAKE-APARTS

Listing 1 equivalences a string with the audio control registers, memory locations 53760-53767. S$ is an eight byte string that is offset so that it points to those locations. CH$ contains the frequency, distortion, and volume values for each of the eight audio control registers.

The first part of Listing 1 takes the frequency, distortion, and volume values from CH$ and puts them into the SOUND command.

You could speed up this routine by storing these values in an array. This would avoid the string-to-floating-point conversions, but would require 4,608 bytes of memory instead of 256 bytes (nine times more space) and would still be slower than the second part of the program.

In the second part, the program sets S$ as a pointer to the audio control registers. They are set very quickly by copying eight-byte substrings of CH$ into S$.

Listing 2 demonstrates the generalized method for equivalencing variables. As written, it can be RUN in Atari BASIC or Turbo BASIC XL.

Listing 2 begins by asking for the size of the floating-point array M(). After DIMensioning M() and the string variables, Listing 2 finds the location of each of the variable tables.

Next, the program jumps to the subroutine at line 2000 to find the variable number, offset and dimensions of M() and S$. The actual equivalencing of M() and S$ occurs in lines 380-500. Lines 520-1250 contain the I/O and initialization benchmarks for the data in *Figure 1* and *Figure 2*.

The subroutine at line 1500 contains a timer and the subroutine at line 1600 prints the first five elements of M() to show that the contents of M() actually do change during the benchmark routines. ▲

Doug White of Arlington, Texas uses his 1200XL as an aid in designing and testing loudspeakers. This is his first appearance in ***Antic****.*

Listing on page 32

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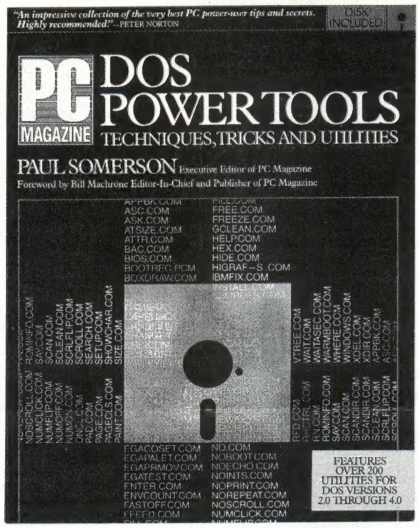
This bulky book/software combo packs a ton of information in its 1275 pages. Author Paul Somerson uses a conversational yet intelligent style throughout. His writing will appeal not just to novices, but also to power users who want to gain that extra edge over their computer. Anyone who wants to learn more about the PC operating system will find all that's needed between these covers.

The book is divided into five parts. "Getting up to Speed" discusses the history of DOS (learn the story of the backslash!), talks about disk organization and hard disk maintenance. With hard disks the fastest-selling addition to home computers, Somerson's detailed tips and explanations are noteworthy. He also devotes ample time to hex numbers and keyboard tricks, and allots an entire chapter to chips and memory (learn the difference between *extended* and *expanded!*).

Part 2 discusses DOS tools—in particular, EDLIN, DEBUG, and drivers like ANSI and VDISK. EDLIN, the DOS line editor, is especially handy for editing batch files. Even more useful are the pages about VDISK.SYS, which provide step-by-step instructions for creating a ramdisk.



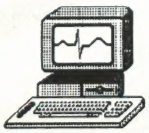
Pack your PC with power using *DOS Power Tools* and its utilities.

When you're ready, you can delve into the technically complex secrets of PC power in part 3. Start with a chapter about batch techniques (you won't get far in DOS without learning to write batch files), and then move through an extended overview of the DOS environment (uncover the mystery of the *master environment block!*) to a discussion of screens and how to harness the EGA video mode on your PC.

The "Favorite Tips" section is probably the first one most users—power and neophyte alike—will turn to. Leading the tips is advice about the DOS command RECOVER.COM (erase it from your hard disk). That's good advice, especially for novice users who might think they can actually *recover* a lost file with this demonic DOS monster.

More specific advice is given about XCOPY (faster than the old standby, COPY), FDISK (for partitioning hard disks larger than 32 megabytes—which the book maintains can't be supported by DOS; take a look at version 4.0, folks), DOS filters, and myriad other DOS commands that can make your computing life easier and more effective.

But *DOS Power Tools* goes further than offering advice and tips that can make you a power user. The book also comes with a disk chock-full of DOS utilities that enhance and improve your operating system. Dubbed *The Utilities That DOS Forgot,* these 200-some-odd



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- Be usable on a wide range of IBM-compatible equipment. That means that MDA compatibility is important, unless graphics are at the core of your program. Graphics programs and games should be CGA-compatible. Also, many of our readers use Tandy equipment. If possible, test your program on a Tandy.
- Have complete documentation.
- Have all features available in the shareware version. No crippled programs are used.
- Be the latest version of the program.

There are some things we definitely *don't want*, too:

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- Buggy programs. (They have to *work!*)
- Programs with impolite exits to DOS. (Give users a chance to abort.)
- Programs that require rebooting to exit. (There's no excuse for this.)
- Pirated software.
- Software using a trademark or copyrighted name or interface. (No Monopoly- or *Pac-Man*–type games, for example.)
- Uncompiled BASIC programs.
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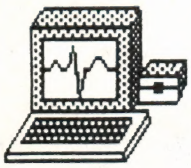

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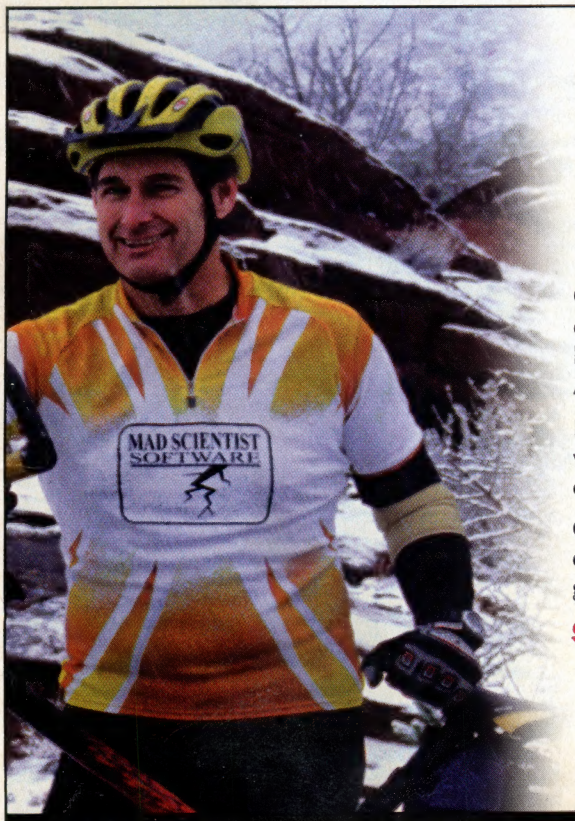

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